This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-31. (Cancelled)

32. (Original) A method for screening a compound to determine the degree of inhibition or binding of a biomolecular interaction by the compound comprising contacting the compound to be tested with the components of a biomolecular interaction that are incorporated within a carrier and are capable of forming a biomolecular interaction in the carrier, and wherein inhibition of the formation of the biomolecular interaction or binding by the compound causes a change in the amount of a detectable signal produced by the molecules of the interaction of by one or more labels at or near the site of interaction of the molecules.

33. (Previously Amended) The method according to claim 32 wherein the biomolecular interaction is incorporated within the carrier that comprises a matrix of inorganic, organic or organic and inorganic material and containing a biomolecular interaction entrapped within the matrix, wherein the biomolecular interaction comprises two entities that can be reversibley, dissociated from the other and wherein the biomolecular interaction is bioactive within the matrix.

34. (Original) The method according to claim 32 wherein the carrier comprises a silica based glass.

35. (Previously Amended) The method according to claim 32 wherein the carrier is prepared from a silicon, titanium, vanadium or cerium-based metal alkoxide, alkylated metal alkoxide or otherwise functionalized metal alkoxide or a corresponding metal chloride, silazane, polyglycerylsilicate or other silicate precursor .

36. (Previously Amended) The method according to claim 32 wherein the carrier is derived by a sol-gel processing method.

37. (Previously Amended) The method according to claim 32 wherein the biomolecular interaction is bioactive.

38. (Original) The method of high through put screening for a substance which inhibits or binds a biomolecular interaction, comprising the steps of:

(a) incorporating a bimolecular interaction within a carrier;

(b) forming an array of sol-gel derived spots on a support wherein each spot contains a biomolecular interaction;

(c) measuring a original signal from the biomolecular interaction in the absence of any other substances;

(d) reversibly disrupting the biomolecular interaction such that the signal is detectably altered;

(e) adding the substance to the bimolecular interaction in the carrier, and reversing the disruption; and

(f) measuring the signal;

where the original signal is not recovered, the substance is determined to bind or inhibit the bimolecular interaction.

39. (Original) A method according to claim 38 \wherein the signal is excited by a He-Cd laser through an optical fiber or by a nitrogen laser through a bifurcated optical fiber.

40. (Original) The method according to claim 39 wherein the signal is detected through the same fiber.

41. (Original) The method according to claim 40 wherein the signal is detected in a time-gated or time resolved mode.

42. (Previously Amended) The method of detecting signals generated by an array according to claim 38 wherein the signal is excited by a laser, lamp or light emitting diode, either directly or through an optical fiber, and fluorescence is detected using a CCD camera.

43. (Original) A method of normal or frontal affinity chromatography for pre-screening a substance for binding or inhibiting a bimolecular interaction comprising:
incorporating a biomolecular interaction or individual protein partners within a carrier;
placing said carrier in a column;
adding a denaturant;
passing said substance including an indicator ligand through the column in conjunction with removal of the denaturant; and
determination of retention behaviour by fluorescence or mass spectrometry.

44. (Previously Amended) The method of claim 43 wherein the carrier comprises a matrix of inorganic, organic or organic and inorganic material and containing a biomolecular interaction entrapped within the matrix, wherein the biomolecular interaction comprises two entities that can be reversible, dissociated from the other and wherein the biomolecular interaction is bioactive within the matrix.